

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference  26822 - 0082 PC	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No.  PCT/US 03/34562	International filing date (day/month/year)  29/10/2003	(Earliest) Priority Date (day/month/year)  31/10/2002
Applicant  SIPIX IMAGING, INC.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 07 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☒ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

ELECTROPHORETIC OR ELECTROMAGNETOPHORETIC DISPLAY DEVICE WITH SEVERAL LAYERS OF  
DISPLAY CELLS, AND MANUFACTURING METHOD

5. With regard to the **abstract**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

02

☐ as suggested by the applicant.

☐ None of the figures.

☐ because the applicant failed to suggest a figure.

☒ because this figure better characterizes the invention.

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International application No.

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### Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

The application relates to an electrophoretic or electromagnetophoretic display comprising a stack of several, preferably two, layers of cells (21,22) with electrophoretic and/or magnetophoretic fluids, which are preferably arranged in a staggered fashion, and a manufacturing method therefor by lamination of several layers of sealed display cells. The electrophoretic display according to the application provides improved contrast ratio, switching performance, reflectivity at the minimum optical density, and structural integrity.

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International application No.  
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## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-24

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-24

Claims 1-24 relate to an electrophoretic display comprising more than one layer of display cells filled with electrophoretic fluids, in particular (claims 18-24) to a display where the cells in the stacked layers are arranged in a staggered fashion.

2. Claims: 25-27

Claims 25-27 relate to an electromagnetophoretic display comprising two layers wherein the bottom layer is filled with a fluid comprising a mixture of magnetic and non-magnetic particles.

3. Claims: 28-46

Claims 28-46 relate to methods for manufacturing electrophoretic displays with several layers of display cells by means of lamination of single-layer electrophoretic displays.

## INTERNATIONAL SEARCH REPORT

International Application No

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G02F1/167

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G02F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	US 2002/033793 A1 (MACHIDA YOSHINORI ET AL) 21 March 2002 (2002-03-21) paragraph [0135] - paragraph [0146]; figure 15 paragraph [0061] - paragraph [0064] ---	1-8, 11-17 9,10, 18-24
X A	US 2002/135861 A1 (KAJIURA SADA O ET AL) 26 September 2002 (2002-09-26) paragraph [0109] - paragraph [0117]; figures 17,18 paragraph [0077] - paragraph [0079] ---	1-8, 11-17 9,10, 18-24
X A	WO 02/057843 A (E INK CORP) 25 July 2002 (2002-07-25) page 31, line 5 - page 34, line 11; figure 11 page 16, line 1 - line 7 --- -/--	1,8-16 2-7, 17-24

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

11 March 2004

Date of mailing of the international search report

29.06.04

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# INTERNATIONAL SEARCH REPORT

International Application No

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	US 2003/174385 A1 (WU ZARNG-ARH GEORGE ET AL) 18 September 2003 (2003-09-18) the whole document ---	1-24
P,X	PATENT ABSTRACTS OF JAPAN vol. 2003, no. 09, 3 September 2003 (2003-09-03) -& JP 2003 131270 A (CANON INC), 8 May 2003 (2003-05-08)	1-8, 11-24
A	abstract the whole document -----	9,10

# INTERNATIONAL SEARCH REPORT

information on patent family members

International Application No

PCT/US 03/34562

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2002033793 A1	21-03-2002	JP 2002099003 A	05-04-2002
US 2002135861 A1	26-09-2002	JP 2002277904 A	25-09-2002
		JP 2003121886 A	23-04-2003
WO 02057843 A	25-07-2002	EP 1342126 A2	10-09-2003
		WO 02057843 A2	25-07-2002
		US 2002145792 A1	10-10-2002
		US 2003096113 A1	22-05-2003
US 2003174385 A1	18-09-2003	US 2003063370 A1	03-04-2003
		US 2002196525 A1	26-12-2002
		WO 2004051353 A1	17-06-2004
		CA 2448804 A1	19-12-2002
		CN 1391133 A	15-01-2003
		EP 1397720 A1	17-03-2004
		WO 02100155 A1	19-12-2002
JP 2003131270 A	08-05-2003	NONE	